AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-68 (Canceled).

69. (Previously Presented) A method for supplementing a flow of blood to a portion of the cardiovascular system of a patient, the method comprising:

(a) inserting a catheter device into the vasculature of the patient and advancing the catheter device to a first location within a first coronary vessel within the cardiovascular system;

(b) guiding the catheter device through an interstitial passageway formed between the first location and a second location within a second coronary vessel within the cardiovascular system; the second location within the second coronary vessel being distal to an obstruction in the second coronary vessel; and

(c) forming a blood flow path from a heart chamber directly to the second coronary vessel.

70. (Previously Presented) The method according to claim 69, wherein forming a blood flow path from the heart chamber directly to the second coronary vessel includes placing a conduit in a heart wall between the heart chamber and the second coronary vessel.

71. (Previously Presented) The method according to claim 69, wherein the interstitial passageway is formed through a wall of the first coronary vessel and through

a wall of the second coronary vessel between the first and second locations.

72. (Previously Presented) The method according to claim 69, wherein the second coronary vessel is a coronary artery.

73. (Previously Presented) The method according to claim 72, wherein the coronary artery is a left anterior descending coronary artery.

74. (Previously Presented) The method according to claim 72, wherein the first coronary vessel is a coronary vein proximate to the coronary artery.

75. (Previously Presented)The method according to claim 74, wherein the first coronary vessel is a great cardiac vein.

76. (Previously Presented) A method for supplementing a flow of blood to a portion of the cardiovascular system of a patient, the method comprising:

(a) inserting a catheter device into the vasculature of the patient and advancing the catheter device to a first location within a first coronary vessel within the cardiovascular system;

(b) guiding the catheter device through a first interstitial passageway formed between the first location and a second location within a second coronary vessel within the cardiovascular system;

(c) advancing the catheter device to a third location within the second coronary vessel;

(d) guiding the catheter device through a second interstitial passageway formed between the third location and a fourth location within the first coronary vessel; the fourth location being distal to an obstruction in the first coronary vessel; and

(e) forming a blood flow path from a heart chamber directly to the first coronary vessel.

77. (Previously Presented) The method according to claim 76, wherein forming a blood flow path from the heart chamber directly to the first coronary vessel includes placing a conduit in a heart wall between the heart chamber and the first coronary vessel.

78. (Previously Presented) The method according to claim 76, wherein:

(a) the first interstitial passageway is formed through a wall of the first coronary vessel and through a wall of the second coronary vessel between the first and second locations; and

(b) the second interstitial passageway is formed through a wall of the second coronary vessel and through a wall of the first coronary vessel between the third and fourth locations.

79. (Previously Presented) The method according to claim 76, wherein the first coronary vessel is a coronary artery.

80. (Previously Presented) The method according to claim 79, wherein the coronary artery is a left anterior descending coronary artery.

81. (Previously Presented) The method according to claim 79, wherein the second coronary vessel is a coronary vein proximate to the coronary artery.

82. (Previously Presented) The method according to claim 81, wherein the first coronary vessel is a great cardiac vein.

83. (Previously Presented) A catheter for directing a guidewire device substantially laterally with respect to a body passage within which the catheter is introduced, comprising:

an elongate member having proximal and distal ends, having a distal portion adapted for insertion within a body passage, and defining a longitudinal axis and an outer peripheral surface;

a lumen extending between the proximal end and a peripheral opening in the distal portion; and

a deflecting member adjacent the peripheral opening for directing a guidewire device substantially laterally with respect to the longitudinal axis.

84. (Previously Presented) The catheter of claim 83, wherein the deflecting member has a predetermined acute deflection angle for directing the guidewire device substantially distally and laterally.

85. (Previously Presented) The catheter of claim 83, wherein the guidewire device comprises a needle assembly having a guidewire lumen extending therethrough.

86. (Previously Presented) The catheter of claim 83, further comprising an orientation element on the distal portion having a predetermined relationship with the peripheral opening.

87. (Previously Presented) A catheter for directing a guidewire substantially laterally with respect to a body passage within which the catheter is introduced, comprising:

an elongate member having proximal and distal ends, having a distal portion adapted for insertion within a body passage, and defining a longitudinal axis and an outer peripheral surface;

a first lumen extending proximally from a first opening in the distal end; and

a second lumen extending between the proximal end of the elongate member and a second lateral opening in the distal portion proximate the distal end.

88. (Previously Presented) The catheter of claim 87, wherein the second lateral opening is located on the peripheral surface of the elongate member.

89. (Previously Presented) The catheter of claim 87, wherein the second lumen includes a deflection ramp adjacent the second lateral opening.

90. (Previously Presented) The catheter of claim 87, wherein the first lumen has a peripheral opening.

91. (Previously Presented) The catheter of claim 90, wherein the peripheral opening is in the distal portion.

92. (Previously Presented) A device for delivering a conduit through the wall of a patient's heart and the wall of a coronary vessel to communicate a heart chamber with the coronary vessel, the device comprising:

a support member configured for placement through the wall of a heart so that a portion of the support member extends into a heart chamber;

an expandable conduit sized and configured for placement in the heart wall so as to communicate the heart chamber with a coronary vessel, wherein the conduit is supported on the support member in a collapsed orientation and is expanded to an expanded orientation for placement in the heart wall; and

wherein the support member has an expansion mechanism that engages the conduit and is actuated to move the conduit from the collapsed orientation to the expanded orientation to securely position the conduit in the heart wall.

93. (Previously Presented) The device of claim 92, wherein the distal end of the support member is sharpened for forming an opening in the wall of the heart.

94. (Previously Presented) The device of claim 92, wherein the support member comprises a hollow member that removably receives a dilator having a sharpened tip for forming an opening in the heart wall.

95. (Previously Presented) The device of claim 92, further comprising a positioning member for engaging tissue to control the position of the conduit with respect to the heart wall.

96. (Previously Presented) A method for placing a conduit in the wall of a patient's heart, the method comprising steps of:

(a) providing a support member and a conduit;

(b) passing the support member and the conduit through a wall of a coronary vessel and through the wall of a patient's heart;

(c) positioning the conduit within the wall of the heart; and

(d) removing the support member from the wall of the heart.

97. (Previously Presented) The method of claim 96, wherein the conduit is expandable and the support member is provided with an expandable member that supports and expands the conduit, and further comprising the step of expanding the conduit within the wall of the heart.

98. (Previously Presented) The method of claim 96, wherein step (b) is carried out by passing a sharpened end of the support member through the wall of the heart.

99. (Previously Presented) The method of claim 96, wherein step (b) is carried out by first forming an opening extending at least partially through the wall of the heart and then passing the support member through the opening.

100. (Previously Presented) The method of claim 96, wherein the conduit is passed through a wall of a coronary vessel and through the wall of the heart into a heart chamber containing oxygenated blood, and the conduit is positioned so as to place the heart chamber in communication with the interior of the coronary vessel.

101. (Previously Presented) The method of claim 99, wherein the coronary vessel is a coronary artery and the heart chamber is the left ventricle.

102. (Previously Presented) The method of claim 100, wherein the support member is positioned within the coronary vessel while carrying out steps (b) and (c) and then is removed from the vessel.

103. (Previously Presented) A method for placing a conduit in the wall of a patient's heart at a selected position with respect to the heart wall, the method comprising steps of:

(a) providing a support member and a conduit, the support member having a

positioning member disposed at a predetermined location with respect to the conduit;

(b) passing the support member and the conduit through a wall of a coronary vessel and through the wall of a patient's heart;

(c) locating the positioning member against tissue to place the conduit at a selected location within the wall of the heart; and

(d) removing the support member and leaving the conduit in the wall of the heart.

104. (Previously Presented) A method for placing and expanding a conduit in the wall of a patient's heart, the method comprising steps of:

(a) providing a support member and a conduit, the conduit being supported in a collapsed orientation and movable to an expanded orientation;

(b) placing the support member and the conduit in a wall of a patient's heart;

(c) positioning the conduit within the wall of the heart;

(d) expanding the conduit to the expanded orientation; and

(e) removing the support member and leaving the conduit in the wall of the heart.

105. (Previously Presented) The method of claim 104, wherein the conduit is passed through a wall of a coronary vessel and through the wall of the heart into a heart chamber containing oxygenated blood, the conduit placing the heart chamber in communication with the interior of the coronary vessel.

106. (Previously Presented) The method of claim 105, wherein the coronary vessel is a coronary artery and the heart chamber is the left ventricle.

107. (Previously Presented) The method of claim 105, wherein the conduit is positioned in the wall of the heart so that one end of the conduit extends partially into the heart chamber.

108. (Previously Presented) The method of claim 104, further comprising a positioning member for engaging the heart wall to control the position of the conduit with respect to the heart wall.

109. (Previously Presented) A method for introducing a medical device through a coronary vessel and the wall of a patient's heart to perform a medical procedure, the method comprising steps of:

positioning a guide member through a coronary vessel and the wall of a patient's heart into a heart chamber;

providing a medical device configured to carry out a medical procedure on the heart; and

using the guide member to introduce the medical device into the heart wall.

110. (Previously Presented) Instrumentation for facilitating penetration of a side wall of a tubular body tissue conduit from the interior lumen of the conduit comprising:

a tubular structure which is axially insertable into and along the lumen of the conduit and which has an axial portion configured to deflect toward a first portion of the interior surface of the side wall from a second portion of the interior surface of the side wall which is axially spaced from the first portion and on the side of the side wall which

is substantially opposite the first portion, the tubular structure having an axially extending interior passageway with an opening to the exterior of the tubular structure adjacent the first portion; and

a laterally flexible, longitudinal, tissue piercing structure configured to pierce a side wall of the tubular body tissue conduit and to project from the side wall through any adjacent tissue outside of the tubular body tissue conduit, wherein said tissue piercing structure is axially insertable into and along the passageway and which is axially reciprocable relative to the tubular structure so that it exits the opening toward the first portion when moved toward the opening.

111. (Previously Presented) The instrumentation defined in claim 110 wherein the tubular structure is configured to resiliently deflect toward the first portion.

112. (Previously Presented) The instrumentation defined in claim 110 wherein the axial portion is an axially medial portion of the tubular structure which is configured to arch toward the first portion from the second portion and from a third portion of the interior surface of the side wall which is on the same side of the side wall as the second portion, the second and third portions being axially spaced from the first portion in respective opposite axial directions from the first portion.

113. (Previously Presented) The instrumentation defined in claim 110 wherein the tissue piercing structure comprises a radiologic material.

114. (Previously Presented) Apparatus for use in medical treatment of a patient's tubular body conduit comprising:

an elongated, laterally flexible but resilient structure having (1) an axially medial portion configured for axial insertion into and along a lumen of the body conduit and also for axial reciprocation through an aperture in a side wall of the body conduit, and (2) an axially distal portion configured for passage along the lumen of the body conduit in either axial direction along that lumen from the aperture.

115. (Previously Presented) The apparatus defined in claim 114 wherein the medial portion is sufficiently laterally flexible so that a distal part of that portion can extend inside the lumen in a first length of the conduit which extends axially in a first direction from the aperture and so that a proximal part of that portion can extend axially along a path which is outside the first length of the conduit and which forms an acute angle with the first length of the conduit.

116. (Previously Presented) The apparatus defined in claim 114 wherein the medial portion is additionally sufficiently laterally stiff to allow the medial portion to be used to push the distal portion axially along the lumen of a second length of the conduit from outside the conduit.

117. (Previously Presented) The apparatus defined in claim 114 wherein the distal portion forms an atraumatic distal end for the medial portion.

118. (Previously Presented) The apparatus defined in claim 114 wherein the medial portion comprises a metal wire.

119. (Previously Presented) The apparatus defined in claim 114 wherein the distal portion comprises radiologically viewable material.

120. (New) The method of claim 103, wherein the conduit is expandable and the support member is provided with an expandable member that supports and expands the conduit, and further comprising the step of expanding the conduit within the wall of the heart.

121. (New) The method of claim 103, wherein step (b) is carried out by passing a sharpened end of the support member through the wall of the heart.

122. (New) The method of claim 103, wherein step (b) is carried out by first forming an opening extending at least partially through the wall of the heart and then passing the support member through the opening.

123. (New) The method of claim 103, wherein the conduit is passed through a wall of a coronary vessel and through the wall of the heart into a heart chamber containing oxygenated blood, and the conduit is positioned so as to place the heart chamber in communication with the interior of the coronary vessel.

124. (New)The method of claim 123, wherein the coronary vessel is a coronary artery and the heart chamber is the left ventricle.

125. (New) The method of claim 103, wherein a support mechanism contacts and supports the heart wall during at least steps (b) and (c).